

Applicants: Gerard Marx and Raphael Gorodetsky  
Serial No: 10/802,400  
Filed: March 17, 2004  
page 3

Amendments to the Claims

Please cancel claims 1-49 without disclaimer or prejudice to applicants' right to pursue the subject matter of these claims in a future continuation or divisional application.

Please add new claims 50-69 as set forth below.

1-49. (Canceled)

50. (New) A wound healing composition comprising wound healing promoting cells and fibrin microbeads, wherein the fibrin microbeads are prepared in the absence of glutaraldehyde as a cross-linking agent, and wherein the fibrin microbeads are prepared by a method comprising the sequential steps of: (i) preparing an aqueous solution comprising fibrinogen, thrombin and Factor XIII; (ii) prior to the onset of coagulation, contacting said aqueous solution with an oil heated to a temperature of about 50-80°C to form an emulsion; (iii) mixing the emulsion at a temperature of about 50-80°C until fibrin microbeads comprising extensively cross-linked fibrin(ogen) are obtained; and (iv) isolating the fibrin microbeads.

51. (New) The composition of claim 50, wherein the wound healing promoting cells are selected from the group consisting of fibroblasts, endothelial cells, chondrocytes, bone forming cells, cartilage forming cells, and combinations thereof.

52. (New) The composition of claim 50, wherein the fibrin microbeads comprise a bioactive agent.

Applicants: Gerard Marx and Raphael Gorodetsky

Serial No: 10/802,400

Filed: March 17, 2004

page 4

53. (New) The composition of claim 50, wherein the fibrin microbeads comprise at least one bioactive agent selected from the group consisting of wound healing promoting agents, growth factors, glucocorticosteroids, steroids, antibiotics, antibacterial compounds, antiviral compounds, and antifungal compounds.

54. (New) The composition of claim 50, wherein the wound is a surgical wound, a burn, an ulcer, and/or a laceration.

55. (New) The composition of claim 50, wherein the composition is affixed to the wound using fibrin glue.

56. (New) The composition of claim 50, wherein at least 30% of the fibrin(ogen) is cross-linked.

57. (New) The composition of claim 50, wherein at least 50% of the fibrin(ogen) is cross-linked.

58. (New) The composition of claim 50, wherein the fibrin microbeads have a diameter of about 50-200 microns.

59. (New) The composition of claim 50, wherein the fibrin microbeads are biodegradable.

60. (New) A tissue forming composition comprising tissue forming cells and fibrin microbeads, wherein the fibrin microbeads are prepared in the absence of glutaraldehyde as a cross-linking agent, and wherein the fibrin microbeads are prepared by a method

comprising the sequential steps of: (i) preparing an aqueous solution comprising fibrinogen, thrombin and Factor XIII; (ii) prior to the onset of coagulation, contacting said aqueous solution with an oil heated to a temperature of about 50-80°C to form an emulsion; (iii) mixing the emulsion at a temperature of about 50-80°C until fibrin microbeads comprising extensively cross-linked fibrin(ogen) are obtained; and (iv) isolating the fibrin microbeads.

61. (New) The composition of claim 60, wherein the tissue forming cells are selected from the group consisting of fibroblasts, smooth muscle cells, endothelial cells, chondrocytes, bone forming cells, cartilage forming cells, neuroblastoma cells, kidney cells, liver cells, pancreatic cells, thyroid cells, glial cells, and combination thereof.

62. (New) The composition of claim 60, wherein the fibrin microbeads comprise a bioactive agent.

63. (New) The composition of claim 60, wherein the fibrin microbeads comprise at least one bioactive agent selected from the group consisting of wound healing promoting agents, growth factors, glucocorticosteroids, steroids, antibiotics, antibacterial compounds, antiviral compounds, and antifungal compounds.

64. (New) The composition of claim 60, wherein the composition is affixed to a prosthetic device.

65. (New) The composition of claim 60, wherein the composition is affixed to a prosthetic device using fibrin glue.

Applicants: Gerard Marx and Raphael Gorodetsky  
Serial No: 10/802,400  
Filed: March 17, 2004  
page 6

66. (New) The composition of claim 60, wherein at least 30% of the fibrin(ogen) is cross-linked.

67. (New) The composition of claim 60, wherein at least 50% of the fibrin(ogen) is cross-linked.

68. (New) The composition of claim 60, wherein the fibrin microbeads have a diameter of about 50-200 microns.

69. (New) The composition of claim 60, wherein the fibrin microbeads are biodegradable.